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UNITED STATES PATENT AND TRADEMARK OFFICE

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Technology Center 2100

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/897,708
Filing Date: July 02, 2001
Appellant(s): COSTANZO ET AL.

Alessandro Steinfl (Reg. No. 56,448)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 23 April 2007 appealing from the Office

action mailed 19 September 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5170252	Gear et al	12-1992
5410698	Danneels et a.	4-1995

5600368	Matthews, III	2-1997
5613122	Burnard et al.	3-1997
5649105	Aldred et al.	7-1997
5706054	Hannah	1-1998
5884004	Sato et al.	3-1999
6208335 B1	Gordon et al.	3-2001
6233428 B1	Fryer	5-2001
6510553 B1	Hazra	1-2003
6757305 B1	Sopenberg et al.	6-2004

Kunda, Mike; "Re:Question on 18" Dish Service Providers!" Google-Groups

Newsgroup: alt.home.repair. 10/27/1997.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 21, 43, and 50 rejected under 35 U.S.C. 103(a) as being unpatentable

over Matthews, III (U.S. 5,600,368) hereinafter referred to as Matthews, in view of Fryer

(U.S. 6,233,428 B1), Gear et al. (U.S. 5,170,252) hereinafter referred to as Gear, and

Sato et al. (U.S. 5,884,004) hereinafter referred to as Sato.

        a.   As per claims 1, 21, 43, and 50, Matthews teaches: plurality of audio and

video sources containing information referring to an event (lines 44-56 of column 3 and

Fig. 2); a streaming server, streaming the contents of a first audio file and a first video

file from the audio and video sources to a user (lines 1-15 of column 6); user operated

control unit communicating with feed distributor and controlling operation of the feed

distributor, so as to instruct the feed distributor to switch between video files, and

feeding a second video file which is different from the first video file (lines 17-46 of

column 5 and Fig. 1, 3, and 6).

        Matthews does not explicitly teach: the feed distributor connected between the

audio/video sources and the streaming server; and the streaming server establishing

separate sessions with the plurality of users by sending each user a separate stream.

However, Fryer discloses: "Broadcast server 3 is located at a regional office of or ISP

office capable of serving a number of centers, and is connected to the routers by a

broad bandwidth lease line, serving to split the video stream from a camera in the

classroom into multiple video streams depending on demand from subscriber

computers," (lines 35-40 of column 6 and shown in Fig. 1). It would have been obvious

to one of ordinary skill in the art at the time of the appellant's invention to have the feed

distributor connected between the audio/video sources and the streaming server; and

the streaming server establishing separate sessions with the plurality of users by

sending each user a separate stream. "For live events, broadcast to multiple centers,

the regional office's video broadcast server 3 will split a single live stream into multiple

streams and route each one to a participating center," (lines 25-28 of column 7 in Fryer).

Matthews does not explicitly teach: switching to a second video file without

altering the first audio file. However, Gear discloses: "A system (10) has a pipeline (12)

comprised of a multi-channel bi-directional video bus (14), multi-channel bi-directional

audio bus (16), and a digital interprocessor communications bus (18). The pipeline (12)

is equipped with a number of ports (20) where media controller (microprocessor) printed

circuit cards (22) can be connected, thus providing a convenient method for connecting

media devices (24) to the pipeline (12). In this manner, a media device's video input and

output can be optionally connected to any of the video pipes (26) of the video bus (14).

Similarly, the media device (24) audio inputs and outputs can be optionally connected to

any of the audio bus (16) pipes (26)," (Abstract). It would have been obvious to one of

ordinary skill in the art at the time of the appellant's invention to switch to a second

video file without altering the first audio file. "Accordingly, it is an object of this invention

to provide a system and method for interconnecting and mixing multiple audio and video

streams associated with multiple media devices in which the different interconnections

are made by the system in response to user inputs with the physical connections being

transparent to the user. It is another object of the invention to provide such a system

and method which will allow video production on a desktop system by a user who is not

a trained video technician." (lines 29-40 of column 2 in Gear).

Matthews does not explicitly teach: the first audio file being interleaved with the

first video file; and the second video file being interleaved with the first audio file upon

switching to a second video file. However, Sato discloses: "It is possible to avoid

intermitting the audio presentation, however, by writing the same (common) audio data

to each angle within a multi-angle scene period on the smallest angle switching unit

(ILVU) level," (lines 49-53 of column 52). It would have been obvious to one of ordinary

skill in the art at the time of the appellant's invention to have the first audio file

interleaved with the first video file, the streaming server establishing separate sessions

with the plurality of users by sending each user a separate stream; and the second

video file being interleaved with the first audio file upon switching to a second video file.

"As previously described, seamless information presentation can be achieved by

arraying the data to assure contiguous information content before and after the

connection points in the reproduced data, or by formatting the data in closed data units

that are completely reproduced at the switching points," (lines 53-58 of column 52 in Sato).

It is for these reasons that one of ordinary skill in the art at the time of the appellant's invention would have been motivated to have the feed distributor connected between the audio/video sources and the streaming server; the streaming server establishing separate sessions with the plurality of users by sending each user a separate stream; switching to a second video file without altering the first audio file; having the first audio file interleaved with the first video file; and the second video file being interleaved with the first audio file upon switching to a second video file in the system as taught by Matthews.

3.   Claims 2-4, 9, 20, 22-24, 42, 44-46, 48, 51, and 53 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer, Gear, and Sato as applied to claims 1 (2-4, 9, 18, 20), 21 (22-24, 42), 43 (44-46, 48), and 50 (51, 53) respectively.

a.   As per claims 2, 22, 44, and 51, Matthews teaches: the user-operated control unit is a remote control unit (Abstract, lines 6-17 of column 5 and Fig. 1, 4, 5-7)

b.   As per claims 3, 23, and 45, Matthews teaches: the audio and video files are streamed over a network (line 57 of column 6 through line 32 of column 7, and Fig. 4 and 7).

c.   As per claims 4, 24, 46, and 53, Matthews teaches: a client-server system (line 57 of column 6 through line 32 of column 7, and Fig. 4 and 7); the control unit

located on the client side (lines 6-17 of column 5 and Fig. 1, 4, 6-7); the streaming

server being located on the server side (line 57 of column 6 through line 32 of column 7

and Fig. 7); and the feed distributor located on the server side (line 57 of column 6

through line 32 of column 7 and Fig. 7).

      d.   As per claims 9 and 48, Matthews teaches: the plurality of audio and video

files comprise a single audio file and a plurality of video files, each video file

corresponding to a different point of view of the event (lines 16-22 of column 6).

      e.   As per claims 20 and 42, Matthews teaches: switching occurs in a

preprogrammed way (lines 15-29 of column 1).

4.   Claims 5-8, 25-28, 47, and 54 rejected under 35 U.S.C. 103(a) as being

unpatentable over Matthews, in view of Fryer, Gear, and Sato as applied to claims 4 (5-

8), 24 (25-28), 46, and 53 respectively.

      a.   As per claims 5 and 25, Matthews teaches: the streaming server and the

feed distributor are located on the same machine (line 57 of column 6 through line 19 of

column 7 and Fig. 7).

      b.   As per claims 6 and 26, Matthews teaches: the streaming server and the

feed distributor are located on different machines (lines 28-35 of column 5 and Fig. 4).

      c.   As per claims 7 and 27, Matthews teaches: a plurality of client applications

(lines 66-67 of column 6); and client-specific user-operated control units communicating

with the feed distributor... (line 57 of column 6 through line 32 of column 7).

d.   As per claims 8, 28, 47, and 54, Matthews teaches: the streaming server

sends difference streams to different clients, each of said clients switchably controlling

said video files independently from the other clients (line 57 of column 6 through line 32

of column 7).

Matthews does not explicitly teach: one audio file and one video file being sent to

each of said different clients. However, Gear discloses: "The pipeline (12) is equipped

with a number of ports (20) where media controller (microprocessor) printed circuit

cards (22) can be connected, thus providing a convenient method for connecting media

devices (24) to the pipeline (12). In this manner, a media device's video input and output

can be optionally connected to any of the video pipes (26) of the video bus (14).

Similarly, the media device (24) audio inputs and outputs can be optionally connected to

any of the audio bus (16) pipes (26). The switching is accomplished through a pair of

analog multiplexers (28) whose connection options have been commanded by local

microprocessor (30) resident on the media device microprocessor control board (22).

The local microprocessor (30) receives instructions for the pipeline switch

interconnections through the interprocessor serial communications bus (18),"

(Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the

appellant's invention to have one audio file and one video file being sent to each of said

different clients. "A software driver interconnects the multiple video and audio devices

(24) in different configurations in response to user inputs to a host data processing

system so that physical assignments of the device communications on the pipeline (12)

are transparent to the user," (Abstract of Gear). It is for this reason that one of ordinary

skill in the art at the time of the appellant's invention would have been motivated to have

one audio file and one video file being sent to each of the different clients in the system

as taught by Matthews.

5.   Claims 10, 32, 49, and 57 rejected under 35 U.S.C. 103(a) as being unpatentable

over Matthews, in view of Fryer, Gear, and Sato as applied to claims 1, 21, 43, and 50

respectively, further in view of Hannah (U.S. 5,706,054).

Matthews teaches: A/V files are compressed before streaming (lines 16-19 of

column 8 and Fig. 4). Since the A/V files are being decoded, they must have been

encoded (compressed) before the server (inherent). Matthews also teaches switching

from one file to another in generic fashion, (lines 36-46 of column 5).

Matthews does not explicitly teach: A/V files comprise key frames; and the

control unit instructs the feed distributor to switch between the first and second A/V files

when a key frame of the second A/V file is encountered.

However, Hannah discloses: "As is well known in the art, the sequence of video

frames input at 39 can include one or more key frames, i.e. frames which are not

subject to video compression and which often are used as a reference for the start of a

particular video scene," (lines 32-3 of column 3).

It would have been obvious to one of ordinary skill in the art at the time of the

appellant's invention to have A/V files comprising key frames; and the control unit

instructs the feed distributor to switch between the first and second A/V files when a key

frame of the second A/V file is encountered. "Preferably, AFC filtering for a sequence of

video frames starts with a key frame," (lines 36-37 of column 3 in Hannah). It is for this

reason that one of ordinary skill in the art at the time of the appellant's invention would

have been motivated to have the control unit instruct the feed distributor to switch

between the first and second A/V files when a key frame of the second video A/V is

encountered in the system as taught by Matthews, Fryer, Gear, and Sato.

6.   Claims 11-12 and 33-34 rejected under 35 U.S.C. 103(a) as being unpatentable

over Matthews, in view of Fryer, Gear, and Sato as applied to claims 1 and 21

respectively, further in view of Soepenberg et al. (U.S. 6,757,305 B1) hereinafter

referred to as Soepenberg.

As per claims 11-12 and 33-34, Matthews does not explicitly teach: the event is

described through event parameters; and the user-operated control unit first requests

the event parameters...

However, Soepenberg discloses: "The pointer to the cacheable data can for

instance be the SI identification of a service event ("television program") or an

identification of where to find an interactive application or other kind of data," (lines 3-6

of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the

appellant's invention to have the event described through event parameters; and have

the user-operated control unit first requests the event parameters to the feed distributor

and then instructs the streaming server to start streaming. "The information on the

required storage gives an indication on how much storage the set-top box 14 needs, to

cache all the cacheable data that is pointed to by the first element in the record. By

using the transport stream-wide or network-wide table/descriptor, the set-top box 14 can

quickly get a complete view of all the cacheable data. For each transport

stream/network, it simply parses a single SI table/descriptor, and it combines the

results. The required bandwidth for broadcasting the table/descriptor can be low, i.e.

the table only needs to be broadcast occasionally. The set-top box does not need

instant access to the table/descriptor, because an access latency does not affect the

performance of a direct interaction with the end-user," (lines 6-18 of column 4 in

Soepenberg). It is for this reason that one of ordinary skill in the art at the time of the

appellant's invention would have been motivated to have the even described through

event parameters; and have the user-operated control unit first requests the event

parameters to the feed distributor and then instructs the streaming server to start

streaming in the system as taught by Matthews, Fryer, Gear, and Sato.

7.   Claims 13, 35, and 58 rejected under 35 U.S.C. 103(a) as being unpatentable

over Matthews, in view of Fryer, Gear, Sato, and Soepenberg as applied to claims 11,

33, and 12 respectively.

Matthews teaches: a number of different points of view of the event (Fig. 2); a

unique logic identifier of each point of view (Table 1 of column 4); an initial point of view

(lines 5-7 of column 4)

Matthews does not explicitly teach: textual description of each point of view, a size of main screen window visualizing a current point of view, a stream bandwidth, and a duration of the event.

However, Fryer discloses: a textual description of each point of view (Fig. 4); a stream bandwidth (lines 35-45 of column 6).

Official Notice taken of the size of a main screen window visualizing a current point of view and the duration of the event. Window size, duration, as well as bandwidth, and textual descriptions as disclosed in Fryer were very well known in the art at the time of the appellant's invention. Window size is a parameter highly dependent upon the viewing apparatus and is well known for nearly any computer system with a graphical interface. Duration is not as important, particularly for live events in which a set length is not given, but it is also well known that for any streamed event, a time limit may be enforced by whomever is streaming the event. Textual descriptions as disclosed in Fryer as very well known in the art and can also be employed as an electronic program guide such as with a digital cable service. The stream bandwidth can be given as a parameter for limiting the stream throughput to prevent extended buffering, buffer under-run, and loss of sync problems. This was also very well known in the art at the time of the appellant's invention. It is known in the art that parameter definitions can be highly dependent upon the system and can comprise nearly any aspect of the system's resources, capabilities, and even the actions of the software/hardware.

It is for these reasons that one of ordinary skill in the art at the time of the appellant's invention would have been motivated to provide parameters comprising a textual description, main screen window size, stream bandwidth, and duration of the event in the system as taught by Matthews, Fryer, Gear, and Soepenberg.

8.   Claims 14 and 36 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer, Gear, Sato, and Soepenberg as applied to claims 13 and 35 respectively, further in view of Aldred et al. (U.S. 5,649,105) hereinafter referred to as Aldred.

Matthews does not explicitly teach: the logic identifier of each point of view is locally defined.

However, Aldred discloses: "channel_set_id, is a user defined identifier that informs the system that a logical channel belongs to a set of channels," (lines 20-21 of column 28).

It would have been obvious to one of ordinary skill in the art at the time of the appellant's invention to have the logic identifier of each point of view be locally defined. "The channel_set_id must be unique within an application sharing set, any channel that is to be part of the set must specify the same identifier," (lines 22-24 of column 28 in Aldred). It is for this reason that one of ordinary skill in the art at the time of the appellant's invention would have been motivated to have the logic identifier of each point of view defined locally in the system as taught by Matthews, Fryer, Gear, Sato, and Soepenberg.

9.   Claims 15 and 37 rejected under 35 U.S.C. 103(a) as being unpatentable over

Matthews, in view of Fryer, Gear, and Sato as applied to claims 1 and 21 respectively,

further in view of Gordon et al. (U.S. 6,208,335 B1) hereinafter referred to as Gordon

and Burnard et al. (U.S. 5,613,122) hereinafter referred to as Burnard.

It is inherent in the system that the feed distributor contains a stream reader.

The feed distributor is in-line in the system as disclosed by the appellant as well as in

the system of Matthews. It is also inherent that the streaming server comprises a

stream producer in both systems.

Matthews does not explicitly teach: "the feed distributor comprises a servers

session manager, a theatre descriptor, and a stream reader; the streaming server

comprising a stream producer; and the user-operated control unit comprises an

interface builder.

However, Gordon discloses: "The information server 108 is coupled to the video

session manager via data path 116, synchronization clock path 118 and control path

120. The server 108 provides data streams on path 116 and a synchronization clock on

path 118 in response to requests for information from the video session manager on

path 120," (lines 51-56 of column 4). Gordon also teaches: "The function of the

navigator is generated through the use of Navigator descriptor files," (lines 32-33 of

column 8).

Burnard discloses: "A user interface builder program allows a user to graphically

design windows, dialogs, and view hierarchies," (lines 31-32 of column 29).

It would have been obvious to one of ordinary skill in the art at the time of the

appellant's invention to have the feed distributor comprise a session manager. "The

video session manager 122 accomplishes all of the transmission interface requirements

of the system 100," (lines 59-60 of column 4 in Gordon). It would also have been

obvious to have the feed distributor comprise a theatre descriptor. "These files are used

as the basis for construction of all navigator applet screens. A navigator descriptor file

defines specific objects (e.g., graphical bitmap, audio, animation and the like) to be

used, their physical location on the navigator menu screen, and their interactions with

the subscriber's remote control actions. The navigator asset builder software program

uses the navigator descriptor files to generate the final pseudo MPEG bitstream that is

sent to the set top terminal. The asset builder reads the objects as defined by the

navigator asset builder and combines them with the appropriate control information also

contained in the navigator descriptor files," (lines 33-45 of column 8 in Gordon). It is

presumed by the examiner that "theatre" is to be used as a location descriptor which is

fully disclosed by Gordon.

It would have been obvious to one of ordinary skill in the art at the time of the

appellant's invention to have the user-operated control unit comprise an interface

builder. "By choosing various User Interface (UI) elements from a menu or palette, a

user can build a window or dialog that can be used from another program," (lines 33-35

of column 29 in Burnard).

It is for this reason that one of ordinary skill in the art would have been motivated

to have the feed distributor comprise a session manager and a theatre descriptor and

have the user-operated control unit comprise an interface builder in the system as

taught by Matthews, Fryer, Gear, and Sato.

10.   Claims 16-17 and 38-39 rejected under 35 U.S.C. 103(a) as being unpatentable

over Matthews, in view of Fryer, Gear, and Sato as applied to claims 1 and 21

respectively, further in view of Hazra (U.S. 6,510,553 B1).

    a.   As per claims 16 and 38, Matthews does not explicitly teach: streaming

server streams additional A/V files which are output on secondary windows on the user

screen, the secondary windows being different from a main window where the first A/V

file is output.

    However, Hazra discloses: "Data files corresponding to the subscribed layers of

the first and second sources may be received in a stream over the fixed bandwidth

communications path, output files may be produced which correspond to the received

data files for the first source, and output files may be produced corresponding to the

received data files for the second source. The output files for the first source may be

displayed in a first portion or window of a display, and output files for the second source

may be simultaneously displayed in a second portion or window of the display, thereby

providing a picture-in-picture (PIP) display for streaming digital video," (Abstract).

    It would have been obvious to one of ordinary skill in the art at the time of the

appellant's invention to have the streaming server stream additional A/V files, which are

output on secondary windows on the user screen, the secondary windows being

different from a main window where the first A/V file is output. "The two decoded video

sequences from these layers may be displayed in the PIP format as shown. The client

system also subscribes to an audio stream corresponding to the primary source (at time

T1, this is from file source A). At some time T262, the user may decide to switch the

focus between the two windows. This may be indicated by double clicking a computer

mouse button when a mouse pointer is over the PIP area, for example, although any

method of indicating input to the graphical user interface may be employed. As a result

of the switch indication, the client changes the current subscription of sources to accept

only the base layer 58 of file source A, but to accept the base layer 60 and the

enhancement layers 64 of file source B. This results in a change to the display whereby

video data files from file source B are the primary source shown in the first portion 52 of

the screen and video data files from file source A are the secondary source shown in

the second portion 54 of the screen. The switch may be delayed by a small time

interval so that subscription changes may be synchronized with key frames in the

stream that are assumed to be present at regular intervals. At the time of the switch,

the audio subscription may also be changed to maintain the association with the

appropriate source selected as the primary source," (lines 31-51 of column 7 in Hazra).

It is for this reason that one of ordinary skill in the art at the time of the appellant's

invention would have been motivated to have the streaming server stream additional

A/V files, which are output on secondary windows on the user screen, the secondary

windows being different from a main window where the first A/V file is output in the

system as taught by Matthews, Fryer, Gear, and Sato.

b.   As per claims 17 and 39, Matthews does not explicitly teach: additional
A/V files occupy bandwidth which is reduced when compared with the bandwidth
occupied by said first A/V files.

However, Hazra discloses: "At time T1 50, a user of client system 38 selects the
multimedia content from file source A 32 as the primary source of the stream and the
multimedia content from file source B 34 as a secondary source of the stream. As a
result of this selection, video data from the primary source may be shown on a display
in a first portion 52 of the screen, and video data from the secondary source may be
shown on the display in a second portion 54 of the screen, thereby providing PIP
capability," (lines 8-17 of column 7).

It would have been obvious to one of ordinary skill in the art at the time of the
appellant's invention to have additional A/V files occupy bandwidth which is reduced
when compared with the bandwidth occupied by said first A/V files. "The first portion
may be larger than the second portion because more information for display is being
received for the primary source as compared to the secondary source," (lines 17-20 of
column 7 in Hazra).

It is for this reason that one of ordinary skill in the art at the time of the appellant's
invention would have been motivate to have additional A/V files occupy bandwidth
which is reduced when compared with the bandwidth occupied by said first A/V files in
the system as taught by Matthews, Fryer, Gear, and Sato.

11.   Claims 19 and 41 rejected under 35 U.S.C. 103(a) as being unpatentable over

Matthews, in view of Fryer, Gear, and Sato as applied to claims 7 and 27 respectively,

further in view of Kunda/McCanta (Google Groups).

Matthews does not explicitly teach: a user controls switching for a number of

other users. However, McCanta questions: "

>   I don't know what would hold you

>back from doing this. You would simply be limited to having the same

>channel on all of the TV's without buying more special equipment. That's

>where the catch is, as I understand things."

In response, Kunda discloses: "If individual channel selection at the various tv's is

not needed, then the output from the receiver to the tv may be split (using the $15

splitter/amps you mentioned) to as many tv's as desired. If you make sure the satellite

receiver you buy uses a UHF remote, then changing channels from any tv is quite

simple."

It would have been obvious to one of ordinary skill in the art at the time of the

appellant's invention to have a user controlling the switching for a number of other

users. Motivation comes in Kunda's response in that the channel may be changed on

multiple televisions that are connected to a single receiver via a splitter. It is for this

reason that one of ordinary skill in the art at the time of the appellant's invention would

have been motivated to have a user controlling the switching for a number of other

users in the system as taught by Matthews, Fryer, Gear, and Sato.

12.   Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews,

in view of Fryer, Gear, and Sato as applied to claim 21, further in view of Danneels et al.

(U.S. 5,410,698) hereinafter referred to as Danneels.

Matthews does not explicitly teach: the plurality of audio and video files comprise

a single video file and a plurality of audio files.

However, Danneels discloses: "For example, the video and English audio data

streams of the first television program may be related together to form a first channel.

That same video data stream may be related to the Spanish audio data stream to form

a second channel," (lines 39-43 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the

appellant's invention to have the plurality of audio and video files comprise a single

video file and a plurality of audio files. "Multicast system 100 comprises a single server

102 and multiple clients 104 linked by network 106. Server 102 captures and posts

data on network channels, with any number of clients 104 independently selecting

channels for receipt and play," (lines 10-15 of column 4 in Danneels).

It is for this reason that one of ordinary skill in the art at the time of the appellant's

invention would have been motivated to have the plurality of audio and video files

comprise a single video file and a plurality of audio files in the system as taught by

Matthews, Fryer, Gear, and Sato.

13.   Claims 30-31 rejected under 35 U.S.C. 103(a) as being unpatentable over

Matthews, in view of Fryer, Gear, Sato, and Danneels as applied to claim 29.

As per claims 30-31, Matthews does not explicitly teach: each audio file corresponds to a different listening point of the event and a different audio source.

However, Danneels discloses: "Server 102 is capable of capturing analog audio and video files from three different sources: (1) files generated locally by camera 108, (2) files received by antenna 110 from a remote source, and (3) recorded files from VCR 112," (lines 16-20 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the appellant's invention to have each audio file correspond to a different listening point of the event and a different source. "Multicast system 100 comprises a single server 102 and multiple clients 104 linked by network 106. Server 102 captures and posts data on network channels, with any number of clients 104 independently selecting channels for receipt and play," (lines 10-15 of column 4 in Danneels).

It is for this reason that one of ordinary skill in the art at the time of the appellant's invention would have been motivated to have each audio file corresponds to a different listening point of the event and a different source in the system as taught by Matthews, Fryer, Gear, and Sato.

14.   Claims 55 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, in view of Fryer, Gear, and Sato as applied to claim 50, further in view of Danneels.

Matthews does not explicitly teach: the plurality of audio and video files comprise a single video file and a plurality of audio files; and each audio file corresponds to a different listening point of the event.

However, Danneels discloses: "For example, the video and English audio data streams of the first television program may be related together to form a first channel. That same video data stream may be related to the Spanish audio data stream to form a second channel," (lines 39-43 of column 4). Danneels also discloses: "Server 102 is capable of capturing analog audio and video files from three different sources: (1) files generated locally by camera 108, (2) files received by antenna 110 from a remote source, and (3) recorded files from VCR 112," (lines 16-20 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the appellant's invention to have the plurality of audio and video files comprise a single video file and a plurality of audio files. "Multicast system 100 comprises a single server 102 and multiple clients 104 linked by network 106. Server 102 captures and posts data on network channels, with any number of clients 104 independently selecting channels for receipt and play," (lines 10-15 of column 4 in Danneels).

It would have been obvious to one of ordinary skill in the art at the time of the appellant's invention to have each audio file correspond to a different listening point of the event and a different source. "Multicast system 100 comprises a single server 102 and multiple clients 104 linked by network 106. Server 102 captures and posts data on network channels, with any number of clients 104 independently selecting channels for receipt and play," (lines 10-15 of column 4 in Danneels).

It is for these reasons that one of ordinary skill in the art at the time of the

appellant's invention would have been motivated to have the plurality of audio and video

files comprise a single video file and a plurality of audio files and have each audio file

correspond to a different listening point of the event and a different source in the system

as taught by Matthews, Fryer, Gear, and Sato.

(10) Response to Argument

(A)   Appellant argues – Regarding claim 1, Sato does not teach the streaming server establishes separate sessions with the plurality of users by sending each user a separate stream.

In response to the above argument, the examiner points out that Sato was not relied upon for the rejection of this limitation. Establishing separate sessions by sending each user a separate stream is disclosed in Fryer, lines 40-42 of column 6: "The number of streams produced by broadcast server 3 will equal the number of subscriber computers online." A stream is sent to each individual subscriber and a session is implicitly formed for each subscriber receiving the stream from the broadcast server. Additionally, Fryer discloses: "For live events, broadcast to multiple centers, the regional office's video broadcast server 3 will split a single live stream into multiple streams and route each one to a participating center," (lines 25-27 of column 7). Fryer clearly teaches establishing separate sessions by sending each user a separate stream because the limitation is explicitly teach in these sections.

(B)   Appellant argues – Regarding claim 1, Sato does not teach the second video file being interleaved with the first audio file.

In response to the above argument, the examiner points to lines 49-53 of column 52 in Sato which disclose: "It is possible to avoid intermitting the audio presentation, however, by writing the same (common) audio data to each angle within a

multi-angle scene period on the smallest angle switching unit (ILVU) level." It is clear from this recitation that a first audio file (common audio data) is interleaved into a second video file (each angle in a multi-angle scene). The appellant additionally argues to this point, that Sato can only be interleaved with a different audio file, the different audio file possibly having the same content of the first audio file. The examiner notes that the appellant does not clearly define the first audio file to distinguish over an exact instance of the data, a copy of the data, or different data with the same file name. Therefore, the jump to a different stream containing the same (common) audio data in Sato is the same as the first audio file as disclosed in the appellant's claims.

(C)   Appellant argues – Regarding claim 1, that the examiner contradicts himself by stating that Sato does not alter the first audio signal upon switching and also stating that a single audio file is written to multiple video files.

In response to the above argument, the examiner points to the previous argument noting that the appellant does not clearly define the first audio file to distinguish over an exact instance of the data, a copy of the data, or different data with the same file name. Therefore, Sato is capable of creating an unaltered copy of the first audio file and interleaving the audio file with both the first video file and second video file.

(D)   Appellant argues – Regarding claim 1, that a person skilled in the art would not be motivated to combine Sato with Matthews because Sato discloses a

method for recording an AV bitstream on an optical disk and Sato does not relate to the

Internet or networks.

In response to appellant's argument that there is no suggestion to

combine the references, the examiner recognizes that obviousness can only be

established by combining or modifying the teachings of the prior art to produce the

claimed invention where there is some teaching, suggestion, or motivation to do so

found either in the references themselves or in the knowledge generally available to one

of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir.

1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case,

the examiner points out that any audio/video editing, including the interleaving of audio

and video files for which Sato was cited, in the appellant's invention occurs on a

computer system. Said computer requires the use of memory, whether this memory is

an optical disk, random access memory (RAM), floppy disk, cache, etc. is irrelevant.

Since the audio/video interleaving of the appellant's invention occurs on a computer and

not a computer network, the incorporation of Sato is justifiable as analogous art.

(E)   Appellant argues – Regarding claim 1, that Fryer does not teach the

streaming server establishing separate sessions with the plurality of users by sending

each user a separate stream.

In response to appellant's argument, this limitation has been discussed in

point (A) above. Above the appellant argued that Sato does not teach this limitation,

and it was pointed out that Fryer, not Sato, was relied upon for teaching this limitation.

Reasoning supporting the citation of Fryer is given above, also in point (A).

(F)   Appellant argues – Regarding claim 1, that Fryer discloses a multicast

method, not a unicast one.

In response to appellant's argument, the examiner pointed out that the

argued limitation was not recited in the appellant's claims. The appellant then argues

that by reciting that "the streaming server establishing separate sessions... sending

each user a separate stream" is sufficient enough for a person skilled in the art to

understand that a unicast model is meant by those words. The examiner points out that

Fryer does disclose the system being "unicast" as described in appellant's claims in

lines 47-53 of column 6 which disclose: "The video stream generated by a camera may,

in addition to being supplied directly to broadcast server 3, be recorded for delayed

broadcast during periods of inactivity at the center or private-time for center workers, or

as part of a menu of viewing options for the parent, who may be given the option of

viewing a live activity or replaying an earlier activity." Giving the option of viewing a live

activity or replaying an earlier activity necessitates the requirement of a unicast system

because a user wouldn't be able to request a replay of an earlier activity without

affecting what is received by all other users. Therefore, the system as disclosed by

Fryer is capable of unicast transmission of data and teaches the argued limitation. The

appellant's breakdown on page 14 of the cited portion of Fryer fails to address the entire

citation and conveniently omits the most relevant portion of the cited portion. The

appellant unequivocally addresses this issue on page 15, regarding the cited portion of Fryer as a pay-per-view option. The appellant's interpretation is unjustified because where Fryer discloses the option of viewing a live activity or replaying an earlier activity, no time frame is given, thus according the interpretation that this option is available on-demand.

(G)   Appellant argues – Regarding claim 1, Fryer does not teach the feed distributor of claim 1.

In response to appellant's argument, the examiner maintains that the broadcast server of the cited portion of Fryer (lines 35-40 of column 6 and item 3 in Figure 1) is equivalent to the feed distributor described in the appellant's claim. The appellant relies on the arguments discussed above that the broadcast server merely splits a stream into multiple streams and routes each one to a participating center without taking into consideration giving the option of replaying an earlier activity on-demand as described by the examiner in point (F). By providing the replayed stream to a user, the broadcast server of Fryer fulfills the description of the feed distributor in claim 1.

(H)   Appellant argues – Regarding claim 1, Matthews does not teach the feed distributor of claim 1.

In response to appellant's argument, the examiner points out that while Matthews does not teach a feed distributor connected between the audio and video

sources and the streaming server, Matthews inherently teaches a feed distributor. The system of Matthews, by providing an audio/video signal, implicitly requires a feed distributor. Appellant is directed to Figure 8 in Matthews which in shows "providing video streams to head end server," at item 132. The feed distributor of Matthews is what provides the video streams to the head end server. This is explicit in Matthews, even though a feed distributor is inherently present in any video system. Fryer was relied upon for teaching the remaining feed distributor limitations. See arguments in point (G) above.

(I)   Appellant argues – Regarding claim 1, Matthews does not teach a user-operated control unit communicating with the feed distributor and controlling operation of the feed distributor.

In response to appellant's argument, the examiner points out that it should be easily understood that the channel selector (lines 18-28 of column 5) represents the user-operated control unit. The user-operated control unit is used to change the channels (lines 29-36 of column 5 in Matthews), the control unit communicates with the set-top box, and the set-top box communicates to the feed distributor which changes the signal received from the provider. This alternative implementation is described on lines 57-65 of column 6 in Matthews wherein virtual channel decoder is not present and the signals from the user-operated control unit are sent to the head end server (feed distributor).

(J)   Appellant argues – Regarding claim 1, Gear does not teach instructing the

feed distributor to switch between video files whereby, upon switching, the feed

distributor feeds to the streaming server a second video file which is different from the

first video file without altering the first audio file.

Appellant's arguments fail to comply with 37 CFR 1.111(b) because they

amount to a general allegation that the claims define a patentable invention without

specifically pointing out how the language of the claims patentably distinguishes them

from the references.

(K)   Appellant argues – Claim 21 is a computer system claim corresponding to

claim 1 and claims 43 and 50 are method claims corresponding to claim 1. See above

arguments.

(L)   Appellant argues – Regarding claims 20 and 42, Matthews does not teach

where switching occurs in a preprogrammed way.

In response to appellant's argument, the examiner points out that in the

cited portion of Matthews (lines 15-29 of column 1), the program producer is

programming the switching which is different from the user causing the switch. While

the appellant argues that this is not a "preprogrammed" way, the user does not interact

with the system in this instance and the switching appears preprogrammed to the user.

The appellant's own specification makes no distinction as to who performs the

preprogramming function.

(M)   Appellant argues – Regarding claim 5, Matthews does not teach wherein the streaming server and the feed distributor are located on the same machine.

In response to appellant's arguments, the examiner points to the cited portion of Matthews (line 57 of column 6 through line 19 of column 7 and Figure 7), which clearly teaches the argued limitation. The appellant's lone argument to this point is that the examiner makes contradictory statements as to whether Matthews teaches the streaming server and the feed distributor being located on the same machine. The examiner points out that the rejection of claim 5 shows that Matthews does in fact teach the streaming server and the feed distributor being located on the same machine. The grounds of rejection of the claim have not changed.

(N)   Appellant argues – Regarding claim 7, Matthews does not teach a plurality of client applications, each client application comprising a client-specific user-operated control unit.

In response to appellant's arguments, the examiner points out that the cited portion of Matthews recites that the head end server services many viewers (lines 66-67 of column 6), thus teaching a plurality of client applications as long as more than one person is utilizing the application, which is by all means likely. Alternatively, it can be argued by the examiner that a system with the feed distributor at the set top box requires one client application while a system with the feed distributor on the server side

requires a different client application. Therefore, both of the appellant's interpretations

of a plurality of client applications is taught by Matthews.

(O)   Appellant argues – Regarding claim 10, Hannah does not teach the

control unit instructs the feed distributor to switch between the first video file and second

video file.

Appellant's arguments fail to comply with 37 CFR 1.111(b) because they

amount to a general allegation that the claims define a patentable invention without

specifically pointing out how the language of the claims patentably distinguishes them

from the references. The examiner points to the cited portion of Hannah which

discloses: "As is well known in the art, the sequence of video frames input at 39 can

include one or more key frames, i.e. frames which are not subject to video compression

and which often are used as a reference for the start of a particular video scene," (lines

32-36 of column 3). It should be clear from this citation that the key frames of Hannah

are used at the start of a video sequence, which includes any switch between video

signals. The examiner additionally points out that Hannah was incorporated to teach

using key frames in general as a marker to designate start/stop points for videos. The

switching limitations have been discussed above in the arguments pertaining to

Matthews.

(P)   Appellant argues – Regarding claim 12, Soepenberg does not teach wherein the user-operated control unit first requests the event parameters from the feed distributor and then instructs the streaming server to start streaming.

Appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The examiner points to the cited portion of Soepenberg which discloses: "The pointer to the cacheable data can for instance be the SI identification of a service event ("television program") or an identification of where to find an interactive application or other kind of data. The information on the required storage gives an indication on how much storage the set-top box 14 needs, to cache all the cacheable data that is pointed to by the first element in the record," (lines 3-6 of column 4). It should be clear from this citation that the SI identification allows for retrieval of program information and then retrieved by the user.

(Q)   The remainder of the appellant's arguments are a rehashing of arguments discussed in points (A)-(P) above and are directed towards claims with similar limitations and/or claims dependent upon claims argued in points (A)-(P).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

mm   MM

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